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SUGHRUE MION, PLLC				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/714,397

Applicant(s)

LEE ET AL.

Examiner

KENAN CEHIC

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 24 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 24, 28-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1-10, 24, 28-31 are objected to because of the following informalities: In claim 1 and similarly claim 6 "an outgoing call" in line 11 seems to refer to "an outgoing call" in line 6 of the respective claims. If this is correct, it is suggested to change the second occurrence of the limitation to --the outgoing call—or --said outgoing call--. Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. Claims 24 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

For claims 24, the claim limitation "A computer readable medium encoded with computer executable instructions" is not a process, machine, manufacture, or composition of matter, or any new and useful improvement thereof. The above limitation can be a signal per se, as defined in section 103 of the specification ("a carrier wave, such as data transmission through the Internet"). It is suggested to the applicant to cancel this definition to overcome this rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-10, 24, 28-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 and similarly claim 6 recites the limitation "the incoming and outgoing call terminal" in line 9 and 14. There is insufficient antecedent basis for this limitation in the claim. While it appears that the applicant is referring to "an incoming and outgoing call terminal" in line 1, the recitation of "a plurality of incoming and outgoing call terminals" makes the claim ambiguous. It is not completely clear which terminal the applicant is referring to. Similar problems exist in claims 28-30.

Claim 1 and similarly claim 6 recites the limitation "the gateway" in lines 11-13 (claim 1) and line 12-13 (claim 6). There is insufficient antecedent basis for this limitation in the claim. There are multiple recitations of "gateway" in the preamble ("plurality of gateways" and "a gateway") making the claim ambiguous. It is not clear which gateway the applicant is referring to. Similar problems exist in claim 28-30.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claim 1, 6, and 24, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al (US 2008/02799178) in view of Edholm (US 6,772,210) and Young (US 2003/0093563)

For claim 1, Chou discloses An incoming and outgoing call terminal (see section 0022 "VoIP telephones") on a duplicate private network that includes a primary private network (see section 0052 "private network"; section 0057-58 "router...positioned between a private network and the public internet...router...receive...from the private network...transmit packets from the public Internet to the correct destination private network..."; section 0012 "private network...internal gateway addresses are hidden from external network devices...proxies are used to accomplish this goal...private gateway address..."; fig 2; 210, 220; fig 3 and 4a; 312, 335, 340, 322, 400, 212(a), 222(a); or section 0062 "gatekeeper...private network"; section 0071 "private gatekeeper) constituted by a gatekeeper (see fig 3; 335, 340 or fig 4a; 400; or section 0062 "gatekeeper...private network") and a plurality of gateways (see fig 2; 210, 220; figs 3 and 4a ; 312, 322, 212a, 222a or fig 3; 335, 340) and a secondary private network

constituted by a gateway and a plurality of incoming and outgoing call terminals (see section 0022 “network gateway...local area networks (both public and private)...VoIP telephones”), comprising:

gateway having a first private internet protocol (IP) address (see section 0012 “private network...internal gateway address...”; see section 0052 “private network”; section 0057-0058 “gateway in the private network...private gateway address...”), which is an address (see section 0012 “private network...internal gateway address...”; section 0057-0058 “gateway in the private network...private gateway address...”) of a relay of the duplicate private network (see section 0057-58 “router...positioned between a private network and the public internet...router...receive...from the private network...transmit packets from the public Internet to the correct destination private network...”; section 0012 “private network...internal gateway addresses are hidden from external network devices...proxies are used to accomplish this goal...private gateway address...”; fig 2; 210, 220; fig 3 and 4a; 312, 335, 340, 322, 400, 212(a), 222(a) section 0022 “network gateway...local area networks (both public and private)...VoIP telephones”); and incoming internal private IP address, which is translated from an incoming internal public network (see sections 0018 “packet translation...network address translation...”; section 0057-58 “voice router...public Internet...private gateway address...will be used to transmit packet from the public Internet ...private network...similar method used...packet arrives from the public Internet destined to a particular private network...)

For claim 28, Chou discloses the duplicate network (see section 0022 “network gateway...local area networks (both public and private)...VoIP telephones”; section 0052

"private network"; section 0057-58 "router...positioned between a private network and the public internet...router...receive...from the private network....transmit packets from the public Internet to the correct destination private network..."; section 0012 "private network...internal gateway addresses are hidden from external network devices...proxies are used to accomplish this goal...private gateway address..."; fig 2; 210, 220; fig 3 and 4a; 312, 335, 340, 322, 400, 212(a), 222(a); or section 0062 "gatekeeper...private network"; section 0071 "private gatekeeper), comprising the incoming and outgoing call terminal (see section 0022 "VoIP telephones"), the gateway (see fig 2; 210, 220; figs 3 and 4a ; 312, 322, 212a, 222a or fig 3; 335, 340) and a gatekeeper (see fig 3; 335, 340 or fig 4a; 400; or section 0062 "gatekeeper...private network").

For claim 29, Chou discloses a primary network network (see section 0052 "private network"; section 0057-58 "router...positioned between a private network and the public internet...router...receive...from the private network....transmit packets from the public Internet to the correct destination private network..."; section 0012 "private network...internal gateway addresses are hidden from external network devices...proxies are used to accomplish this goal...private gateway address..."; fig 2; 210, 220; fig 3 and 4a; 312, 335, 340, 322, 400, 212(a), 222(a); or section 0062 "gatekeeper...private network"; section 0071 "private gatekeeper) including the gateway (see fig 2; 210, 220; figs 3 and 4a ; 312, 322, 212a, 222a or fig 3; 335, 340) and the gatekeeper (see fig 3; 335, 340 or fig 4a; 400; or section 0062 "gatekeeper...private network") and secondary LAN including the gateway (see section 0022 "network gateway...local area networks (both

public and private)...VoIP telephones") and the incoming and outgoing call terminal (see section 0022 "VoIP telephones").

For claim 30, Chou discloses wherein the gatekeeper is an entrance of the duplicate private network network (see section 0052 "private network"; section 0057-58 "router...positioned between a private network and the public internet...router...receive...from the private network....transmit packets from the public Internet to the correct destination private network..."; section 0012 "private network...internal gateway addresses are hidden from external network devices...proxies are used to accomplish this goal...private gateway address..."; fig 2; 210, 220; fig 3 and 4a; 312, 335, 340, 322, 400, 212(a), 222(a); or section 0062 "gatekeeper...private network"; section 0071 "private gatekeeper), the gateway is a relay node (see section 0022 "network gateway...local area networks (both public and private)...VoIP telephones") of the duplicate private network (see section 0052 "private network"; section 0057-58 "router...positioned between a private network and the public internet...router...receive...from the private network....transmit packets from the public Internet to the correct destination private network..."; section 0012 "private network...internal gateway addresses are hidden from external network devices...proxies are used to accomplish this goal...private gateway address..."; fig 2; 210, 220; fig 3 and 4a; 312, 335, 340, 322, 400, 212(a), 222(a); or section 0062 "gatekeeper...private network"; section 0071 "private gatekeeper) and the incoming and outgoing terminal is an exit (see section 0022 "network gateway...local area networks (both public and

private)...VoIP telephones") the duplicate private network (see section 0052 "private network"; section 0057-58 "router...positioned between a private network and the public internet...router...receive...from the private network....transmit packets from the public Internet to the correct destination private network..."; section 0012 "private network...internal gateway addresses are hidden from external network devices...proxies are used to accomplish this goal...private gateway address..."; fig 2; 210, 220; fig 3 and 4a; 312, 335, 340, 322, 400, 212(a), 222(a); or section 0062 "gatekeeper...private network"; section 0071 "private gatekeeper).

Chou is not explicitly specific about the following:

For claim 1, an incoming and outgoing call terminal on a private network , comprising:
an outgoing call transmission unit that receives a calling number, creates an outgoing call including information of the received calling number, and transmits the outgoing call to a gateway, if a second private IP address, which is an address of an exit of the private network , is allotted to the incoming and outgoing call terminal ; an outgoing call setting requesting message transmission unit that creates a message requesting the setting of an outgoing call and transmits the message to the gateway if the outgoing call transmission unit transmits the outgoing call to the gateway; and an incoming call reception unit that receives an incoming call from the gateway if the second private IP address allotted to the incoming and outgoing call terminal is an incoming internal private IP address, which is translated from an incoming internal public IP address by a network address translator server, wherein the incoming internal public IP address is destination information

corresponding to called number information included in the incoming call and the address of an entrance of the private network

For claim 6, a method of enabling an outgoing call and receiving an incoming call in an incoming and outgoing call terminal on a private network comprising:

- (a) receiving a calling number, creating an outgoing call including information of the received calling number, and transmitting the outgoing call to a gateway, if a second private IP address of an exit of the private network is allotted to the incoming and outgoing call terminal ; (b) creating a message requesting the setting of an outgoing call and transmitting the message to the gateway if the outgoing call is transmitted to the gateway; and
- (c) receiving an incoming call from the gateway if the second private IP address allotted to the incoming and outgoing call terminal is an incoming internal private IP address, which is translated from an incoming internal public IP address by a network address translator server, wherein the incoming internal public IP address is destination information corresponding to called number information included in the incoming call and the address of an entrance of the private network .

For claim 24, a computer-readable recording medium, encoded with computer executable instructions which enable a computer to perform the method of claim 6.

For claim 28, a local area network

For claim 29, a first local area network

Edholm from the same field of endeavor discloses the following:

For claim 1, Edholm an incoming and outgoing call terminal (see fig 1; 110) on a private network (see fig 1, 108), comprising:

an outgoing call transmission unit (see fig 1; 110) that receives a calling number (see col 6 lines 55-68 "phone number of the called VoIP device"), creates an outgoing call including information (see fig 4; 404 and col 6 lines 55 through col 7 line 20 "request....phone number of the called VoIP device" and col 7 lines 5-20 "VoIP connection is established") of the received calling number (see col 6 lines 55-col 7 lines 12 "request....phone number of the called VoIP device" and fig 4; 404), and transmits the outgoing call to a gateway (see fig 8; 803, 804 and col 8 lines 1-20 "private VoIP...sends a packet...the gateway forwards....to the public VoIP device"), if a second private IP address (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110"), which is an address (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110") of an exit (see fig 1; 110) of the private network (see fig 1, 108), is allotted to the incoming and outgoing call terminal (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110"); an outgoing call setting (see col 6 lines 55 through col 7 line 10 "determines the called VoIP device....determines the private address...selects a public address...installs an address translation entry....") requesting message transmission unit (see fig 6; 604 "private VoIP device") that creates a message (see fig 4; 404 and col 6 lines 55-68 "request for a VoIP connection") requesting the setting of an outgoing call (see fig. 2a ; 211) and transmits the message to the gateway (see fig. 1; 106 and col 6 lines 55 through col 7 line 20 "receiving a request for a VoIP connection initiated by the private VoIP device") if the outgoing call

transmission unit (see fig 1; 110) transmits the outgoing call to the gateway (see fig 4; 404 and col 6 lines 55 through col 7 line 20 "request....phone number of the called VoIP device" and col 7 lines 5-20 "VoIP connection is established" and fig 8. 803, Gateway, 804); and an incoming call reception unit (see fig 1; 110) that receives an incoming call (see fig 8 ; 801, Gateway, 802 and col 7 line 60- col 8 lines 20 "public VoIP...sends a packet ...the gateway forwards a translated packet to the private VoIP device") from the gateway if the second private IP address allotted (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110") to the incoming and outgoing call terminal (see fig 1; 110) is an incoming internal private IP address (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110") wherein the incoming internal public IP address (see col 9 lines 30-45 "determines a gateway for the VoIP connection....response identifying the gateway" and col 4 lines 40-47 "calling VoIP obtains the network address of a gateway" and fig 1;104) is destination information corresponding to called number information (see fig 9 ; 904 "request...phone number" and col 9 lines 30-45 "based upon the phone number") included in the incoming call (see col 9 lines 30-45 "request from the calling VoIP device....called VoIP device" and col 5 lines 25-50 "initiates the VoIP connection...request") and the address (see col 9 lines 30-45 "determines a gateway for the VoIP connection....response identifying the gateway" and col 4 lines 40-47 "calling VoIP obtains the network address of a gateway" and fig 1;104) of an entrance of the private network (see fig 1; 106 108).

For claim 6, Edholm discloses a method of enabling an outgoing call (see fig 6; 600) and receiving an incoming call (see fig 5; 500) in an incoming and outgoing call terminal

(see fig 1; 110) on a private network (see fig 1, 108), comprising:

(a) receiving a calling number (see col 6 lines 55-68 "phone number of the called VoIP device"), creating an outgoing call (see fig 4; 404 and col 6 lines 55 through col 7 line 20 "request...phone number of the called VoIP device" and col 7 lines 5-20 "VoIP connection is established" and fig 8. 803, Gateway, 804) including information (see fig 4; 404 and col 6 lines 55 through col 7 line 20 "request...phone number of the called VoIP device" and col 7 lines 5-20 "VoIP connection is established" and fig 8. 803, Gateway, 804) of the received calling number (see col 6 lines 55-col 7 lines 12 "request...phone number of the called VoIP device" and fig 4; 404), and transmitting the outgoing call (see fig 8; 803, 804 and col 8 lines 1-20 "private VoIP...sends a packet...the gateway forwards...to the public VoIP device" and see col 7 lines 5-20 "VoIP connection is established") to a gateway (see fig 8; 803, Gateway), if a second private IP address (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110"), which is an address (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110") of an exit (see fig 1; 110) of the private network (see fig 1, 108), is allotted to the incoming and outgoing call terminal (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110");

(b) creating a message requesting (see fig 4; 404 and col 6 lines 55-68 "request for a VoIP connection") the setting of an outgoing call (see col 6 lines 55 through col 7 line 10 "determines the called VoIP device....determines the private address...selects a public address...installs an address translation entry....") and transmitting the message to the gateway (see fig. 1; 106, fig 4; 404 and col 6 lines 55 through col 7 line 20 "receiving a

request for a VoIP connection initiated by the private VoIP device") if the outgoing call is transmitted to the gateway (see fig 4; 404 and col 6 lines 55 through col 7 line 20 "request...phone number of the called VoIP device" and col 7 lines 5-20 "VoIP connection is established" and fig 8. 803, Gateway, 804); and

(c) receiving an incoming call (see fig 8 ; 801, Gateway, 802 and col 7 line 60- col 8 lines 20 "public VoIP...sends a packet ...the gateway forwards a translated packet to the private VoIP device") from the gateway (see fig 8 ; 801, Gateway, 802 and col 7 line 60- col 8 lines 20 "public VoIP...sends a packet ...the gateway forwards a translated packet to the private VoIP device") if the second private IP address allotted (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110") to the incoming and outgoing call terminal (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110") is an incoming internal private IP address (see fig 4; 404 and col 6 lines 55-67 "private address of the private VoIP device 110"), wherein the incoming internal public IP address (see col 9 lines 30-45 "determines a gateway for the VoIP connection....response identifying the gateway" and col 4 lines 40-47 "calling VoIP obtains the network address of a gateway" and fig 1;104) is destination information corresponding to called number information (see fig 9 ; 904 "request...phone number" and col 9 lines 30-45 "based upon the phone number") included in the incoming call (see col 9 lines 30-45 "request from the calling VoIP device....called VoIP device" and col 5 lines 25-50 "initiates the VoIP connection...request") (see col 9 lines 30-45 "determines a gateway for the VoIP connection....response identifying the gateway" and col 4 lines 40-

47 "calling VoIP obtains the network address of a gateway" and fig 1;104) of an entrance of the private network (see fig 1; 106 108).

For claim 24, Edholm discloses a computer-readable recording medium (see col 10 lines 24-67 "memory device...fixed disk...CD-ROM..."), encoded with computer executable instructions which enable a computer to perform the method (see col 10 lines 24-67 "computer program logic....computer executable form....source code") of claim 6 (see above) is recorded.

Young et al from the same or similar field of endeavor discloses :

As regarding claim 1 and similarly claim 6, Young discloses incoming internal private IP address (see section 0019 "IP address...private address field"), which is translated from an incoming internal public IP address (see section 0019 "packets are mapped from a public address field ...IP address...private address field") by a network address translator server (see section 0019 "NAT" and fig 2. "NAT")

For claim 6, Young discloses incoming internal private IP address (see section 0019 "IP address...private address field"), into which an incoming internal public IP address is translated (see section 0019 "packets are mapped from a public address field ...IP address...private address field") by a network address translator (NAT) server (see section 0019 "NAT" and fig 2. "NAT")

For claim 28, Young discloses a local area network (see section 0019, 0044 "LAN"; fig 2 LAN)

For claim 29, Young discloses a first local area network (see section 0019, 0044 "LAN"; fig 2 LAN)

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the teachings / features of Chou by using the features, as taught by Edholm and Young, in order to provide an implementation where various communication services such as facsimile and paging are implemented in an IP network (see Edholm col 1); in order to provide a complete customer premise solution that enables secure, reliable and manageable delivery video, voice and data and remote monitoring of the QoS and device to troubleshoot, monitor a access device, which enhances the users experience and makes it easier and more cost-effective to manage the network/device (see section 0002, 0018-0022 of Young).

It would have been obvious to a person of ordinary skill in the art to substitute the features / private network of Edholm into the private network of Chou (gateway and VoIP telephones) at the time the invention was made. The results of such a substitution would have been predictable to a person of ordinary skill.

5. Claim 2, 3, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al (US 2008/02799178), Edholm (US 6,772,210) and Young (US 2003/0093563) as applied above to claims 1/6, further in view of Yoon (US 2001/0047414)

For claim 2 and 7, Chou, Edholm, and Young discloses the claimed invention as described above.

For claims 3 and 8, Edholm discloses wherein the outgoing call (see fig 8. ; 803, 804) and the incoming call (see fig 8. ; 801, 802) are voice-over-IP (VoIP) calls (see col 3 lines 1-5

“VoIP connection is initiate by the public VoIP device” and col 3 lines 1-10 “VoIP connection...initiated by the private VoIP device”).

Chou, Edholm, and Young are not explicitly specific about:

For claim 2, a private IP address allocation requesting message transmission unit that creates a message requesting private IP address allocation, including information of incoming and outgoing call terminals, directly connected to the gateway, to which private IP addresses are not allotted, and transmits the message to the gateway unless the second private IP address is allotted to the incoming and outgoing call terminal; and a second private IP address allocation reception unit which is allotted the second private IP address from the gateway in response to the reception of the message requesting private IP address allocation.

For claim 7, (d) creating a message requesting private IP address allocation, including information of incoming and outgoing call terminals, directly connected to the gateway, to which private IP addresses are not allotted, and transmitting the message to the gateway unless the second private IP address is allotted to the incoming and outgoing call terminal; and

(e) allotting the second private IP address from the gateway to the incoming and outgoing call terminal in response to the reception of the message requesting private IP address allocation.

Yoon from the same or similar field of endeavor discloses a communication network with the following features:

For claim 2, Yoon discloses a private IP address allocation requesting message transmission unit (see fig 2; 144) that creates a message requesting private IP address allocation (see section 0080 “server 144...requests allocation of private Ip addresses for the subscribers”), including information of incoming and outgoing call terminals (see section 0080 “for the subscribers” and fig 2; 151-154), directly connected to the gateway (see fig 2; 142), to which private IP addresses are not allotted (see section 0046 “public IP addresses to private IP addresses...upon a connection to the dedicated private network”), and transmits the message to the gateway (see section 0080-81 “server 144....requests an allocation of private IP addresses....PPP server...is requested to allocate the private IP addresses”) unless the second private IP address is allotted (see section 0046 “public IP addresses to private IP addresses...upon a connection to the dedicated private network”) to the incoming and outgoing call terminal (see fig. 3 151-154); and

a second private IP address allocation reception unit (see section 0081 “transfers the private addresses to the general subscribers” and fig 2. 151-154) which is allotted the second private IP address (see section 0081 “transfers the private IP addresses to the general subscribers”) from the gateway (see fig 2. 142) in response to the reception of the message requesting private IP address allocation (see section 0080-81 “requests an allocations of private addresses....142 is requested to allocate the private IP addresses....142 allocates....private IP addresses”).

For claim 7, Yoon discloses (d) creating a message requesting private IP address allocation (see section 0080 “server 144...requests allocation of private Ip addresses for

the subscribers”), including information (see section 0080 “for the subscribers” and fig 2; 151-154) of incoming and outgoing call terminals (fig 2; 151-154), directly connected to the gateway (see fig 2; 142), to which private IP addresses are not allotted (see section 0046 “public IP addresses to private IP addresses...upon a connection to the dedicated private network”), and transmitting the message to the gateway (see section 0080-81 “server 144....requests an allocation of private IP addresses....PPP server...is requested to allocate the private IP addresses”) unless the second private IP address is allotted (see section 0046 “public IP addresses to private IP addresses...upon a connection to the dedicated private network”) to the incoming and outgoing call terminal (see fig. 3 151-154); and

(e) allotting the second private IP address (see section 0080-0081 “transfers the private IP addresses to the general subscribers”) from the gateway (see fig 2. 142) to the incoming and outgoing call terminal (see fig 2; 151-154) in response to the reception of the message requesting private IP address allocation (see section 0080-81 “requests an allocations of private addresses....142 is requested to allocate the private IP addresses....142 allocates....private IP addresses”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the features/ teachings of Chou, Edholm, and Young by using the features, as taught by Yoon, in order to a dedicated private network service method wherein the service can be implemented in software without a separate hardware equipment and expanded regardless of equipment and the costs of connectors are low, (for cases when centers equipment fails) (see Yoon sections 0032-45)

6. Claim 4,5, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al (US 2008/02799178), Edholm (US 6,772,210) and Young (US 2003/0093563) as applied above to claims 1/6, further in view of Kim (US 2002/0035624)

For claim 4 and 9, Chou, Edholm, and Young discloses the claimed invention as described above.

For claims 5 and 10, Edholm discloses wherein the outgoing call (see fig 8. ; 803, 804) and the incoming call (see fig 8. ; 801, 802) are voice-over-IP (VoIP) calls (see col 3 lines 1-5 “VoIP connection is initiate by the public VoIP device” and col 3 lines 1-10 “VoIP connection...initiated by the private VoIP device”).

Chou, Edholm, and Young are not explicitly specific about:

For claim 4, a private IP address deletion requesting message transmission unit that creates a message requesting private IP address deletion, including information of a private IP address that is no longer in use, and transmits the message to the gateway if the second private IP address allotted to the incoming and outgoing call terminal is no longer in use; and a second private IP address deletion reception unit, from which the gateway deletes the second private IP address in response to the reception of the message requesting private IP address deletion.

For claim 9, (d) creating a message requesting private IP address deletion, including information of a private IP address that is no longer in use, and transmitting the message to the gateway if the second private IP address allotted to the incoming and outgoing call terminal is no longer in use; and (e) the gateway deleting the second private IP address

from the incoming and outgoing call terminal in response to the reception of the message requesting private IP address deletion.

Kim from the same or similar field of endeavor discloses a communication network with the following features:

For claim 4, Kim discloses a private IP address deletion requesting message transmission unit (see section 0048 “interruption request...from an LD”) that creates a message requesting private IP address deletion (see section 0048 “interruption request...from an LD...deletes the contents related to the private IP address” and claim 8 “delete the private IP address ofappliance”), including information of a private IP address that is no longer in use (see section 0048 “interruption request...from an LD...deletes the contents related to the private IP address” and claim 8 “interruption request of the use of a private Ip address is transmitted.....delete the private IP address ofappliance”), and transmits the message to the gateway (see section 0048 “interruption request...from an LD...deletes the contents related to the private IP address” and claim 8 “gateway.....interruption request of the use of a private Ip address is transmittedrequests.....delete the private IP address ofappliance”) if the second private IP address allotted to the incoming and outgoing call terminal (see section 0036 “allocating a private IP address to an LD”) is no longer in use (see section 0048 “interruption request...from an LD...deletes the contents related to the private IP address” and claim 8 “gateway.....interruption request of the use of a private Ip address is transmittedrequests.....delete the private IP address ofappliance”); and a second private IP address deletion reception unit (see section 0048 “interruption request...from an

LD...deletes the contents related to the private IP address” and claim 8

“gateway....interruption request of the use of a private Ip address is transmitted
....requests.....delete the private IP address ofappliance”), from which the gateway
deletes the second private IP address (see section 0048 “interruption request...from an
LD...deletes the contents related to the private IP address” and claim 8

“gateway....interruption request of the use of a private Ip address is transmitted
....requests.....delete the private IP address ofappliance”) in response to the reception
of the message requesting private IP address deletion (see section 0048 “interruption
request...from an LD...deletes the contents related to the private IP address” and claim 8
“gateway....interruption request of the use of a private Ip address is transmitted
....requests.....delete the private IP address ofappliance”).

For claim 9, Kim discloses (d) creating a message requesting private IP address deletion
(see section 0048 “interruption request...from an LD...deletes the contents related to the
private IP address” and claim 8 “delete the private IP address ofappliance”), including
information of a private IP address that is no longer in use (see section 0048 “interruption
request...from an LD...deletes the contents related to the private IP address” and claim 8
“gateway....interruption request of the use of a private Ip address is transmitted
....requests.....delete the private IP address ofappliance”), and transmitting the
message to the gateway (see section 0048 “interruption request...from an LD...deletes
the contents related to the private IP address” and claim 8 “gateway....interruption
request of the use of a private Ip address is transmittedrequests.....delete the private
IP address ofappliance”) if the second private IP address allotted to the incoming and

outgoing call terminal (see section 0036 "allocating a private IP address to an LD") is no longer in use (see section 0048 "interruption request...from an LD...deletes the contents related to the private IP address" and claim 8 "gateway....interruption request of the use of a private Ip address is transmittedrequests.....delete the private IP address ofappliance"); and (c) the gateway deleting the second private IP address (see section 0048 "interruption request...from an LD...deletes the contents related to the private IP address" and claim 8 "gateway....interruption request of the use of a private Ip address is transmittedrequests.....delete the private IP address ofappliance") from the incoming and outgoing call terminal (see section 0048 "interruption request...from an LD...deletes the contents related to the private IP address" and claim 8 "gateway....interruption request of the use of a private Ip address is transmittedrequests.....delete the private IP address ofappliance") in response to the reception of the message requesting private IP address deletion (see section 0048 "interruption request...from an LD...deletes the contents related to the private IP address" and claim 8 "gateway....interruption request of the use of a private Ip address is transmittedrequests.....delete the private IP address ofappliance").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify / combine the features of Chou, Edholm, and Young by using the features, as taught by Kim, in order to be able to access a network from outside, sharing on public IP address by devices (thereby saving limited public Ip addresses) and for unskilled users to easily build a network (see Kim 0017-0020).

7. Claim 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al (US 2008/02799178), Edholm (US 6,772,210) and Young (US 2003/0093563) as applied above to claims 1/6, further in view Chien et al (US 2002/0155972)

For claim 31, Chou, Edholm, and Young discloses the claimed invention as described above.

For claim 31, Chous discloses the gateway (see section 0022 “network gateway...local area networks (both public and private)...VoIP telephones”).

For claim 31, Edholm discloses the second private IP address (see fig 4; 404 and col 6 lines 55-67 “private address of the private VoIP device 110”)

Chou, Edholm, and Young are silent about:

For claim 31, a node is in charge of the private IP address allocation.

Chic from the same or similar field of endeavor discloses a communication network with the following features:

For claim 31, Chic discloses a node is in charge of the private IP address allocation (see section 0034 “private address that was actually assigned...private IP address”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the features of Chou, Edholm, and Young by using the above recited features, as taught by Chic, in order to provide reducing traffic over a communication link used by a computer network and methods and apparatus for controlling the use of resources in a computer network, so that more users can be accommodated on a network (see Chic sections 0006-13)

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenan Cehic whose telephone number is (571) 270-3120. The examiner can normally be reached on Monday through Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KC

/Kwang B. Yao/

Supervisory Patent Examiner, Art Unit 2416